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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,145

09/11/2003

Kevin A. McCullough

P00471-US2

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7590

06/09/2004

BARLOW, JOSEPHS & HOLMES, LTD.
101 DYER STREET
5TH FLOOR
PROVIDENCE, RI 02903

EXAMINER

LAMB, BRENDA A

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 10/605,145	Applicant(s) MS Cullough, Jd
Examiner LAMB	Group Art Unit 1734

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.**

Disposition of Claims

- ☒ Claim(s) 1-9 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-5 and 9 is/are rejected.
- ☒ Claim(s) 6-8 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Stuart.

Stuart teaches the design of an assembly as shown in Figure 1 comprised of the following elements: an injection molding die1 having an input end, output end, a material flow channel between input and output end, a fiber feed section in the material flow channel in the material flow channel adjacent to the input end and a cooling section in the material flow channel adjacent to the output end (column 5 lines 9-34); a fiber feed tube 2; and a means for injecting a pressurized flow of molten material into the input end of the injection molding die (column 2 lines 36-42). Stuart shows in Figure 1 that the pressurized flow of material flow in a first direction from the input end to the output end of the injection molding die and the fiber feed tube being aligned parallel to the first direction. Thus Stuart teaches every element of the claimed apparatus assembly set forth in claim 1-3. With respect to claim 4, Stuart assembly is capable of coating a continuous strand of fiber reinforcing which is a carbon fiber.

Claims 1 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilakos.

Hilakos teaches the design of an assembly as shown in Figure 1 comprised of an injection molding die having an outer wall, an input end, a material flow channel between the input end and output end having a cross sectional area, a fiber feed tube 24 as shown in Figure 3 residing in the flow channel of the injection molding die adjacent to the input end and a means for injecting a molten polymer material into the injection molding die, conventional extruder (see column 4 lines 41-45). Thus Hilakos teaches every element of the assembly set forth in claim 1. With respect to claim 5, the same rejection applied to claim 1 is applied here. Hilakos shows in figure 3 shows that the second end of the fiber feed tube is located in the center of the material flow channel. Hilakos infers at column 5 line 61-64 that heating of apparatus is optional. Therefore any point downstream of the fiber feed section including adjacent to output end is a cooling section in the unheated apparatus. Hilakos shows the flow of material in a linear fashion from input to output end of the material flow channel. Thus Hilakos teaches every element of the assembly set forth in claims 5-6.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hilakos in view of Solomon.

Hilakos is applied for the reasons noted above. Hilakos fails to teach barrel and plunger assembly. However, it would have been obvious to modify Hilakos apparatus by substituting its means for providing a molten flow of polymer with another means such as taught by Solomon since barrel/plunger assembly is one of the conventional

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extruder means used to extrude a thermoplastic material about a stand material (see column 2 line 16-24).

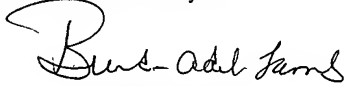
The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, an injection molding barrel and plunger assembly and material flow channel is tapered with cross-sectional area decreasing from input end to output end must be shown or feature(s) canceled from the claims(s). No new matter should be entered.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Material flow channel is tapered with cross-sectional area decreasing from input end to output end.

Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Brenda A Lamb at telephone number (571)-272-1231. The examiner can normally be reached on Monday thru Tuesday and Thursday thru Friday with alternate Wednesdays off.

B. A. Lamb/afj
May 19, 2004



BRENDA A. LAMB
PRIMARY EXAMINER